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CERTIFICATE OF TRANSLATION

As a below named translator, I hereby declare that my residence and citizenship are as stated below next to my name and I hereby certify that I am conversant with both the English and Korean languages and the document enclosed herewith is a true English translation of the Invention Disclosure with respect to the Korean patent application No. 2000-70099 filed on November 23, 2000.

NAME OF THE TRANSLATOR : Yun-Jeong LEE

SIGNATURE : Lee Yun Jeong

Date : February 7, 2007

RESIDENCE : MIHWA BLDG., 110-2, MYONGRYUN-DONG 4-GA, CHONGRO-GU, SEOUL 110-524, KOREA

CITIZENSHIP : REPUBLIC OF KOREA

♦ Invention disclosure

<<Rights, which can be registered with respect to the present invention relating to the jobs of employees, are granted to an employees' corporation under the regulation of articles 39 and 40 of the patent law >>.

■ The present employee invention is received to the intellectual property team of the telecommunication institute (Suwon city and Gumi city).

■ Title of Invention : METHOD FOR ALLOCATING A COMMON CHANNEL IN A CDMA MOBILE COMMUNICATION SYSTEM

■ Name of Subject: IMT-2000 Standardization II ■ Subject Code:DQ001

■ Name of Product: Allocation of Common Channel

■ Name of Core Technique (Code)

■ Evaluation of technical contents

<table>
<tr><td>Items</td><td colspan="6"></td></tr>
<tr><td>Type of Invention</td><td colspan="6">● individual invention ○ industry-university cooperation ○ outside development
○ corporative development</td></tr>
<tr><td>Contract Management</td><td colspan="6">[Contract Attachment]
The name of File | The description of File
[inscription of a property right and description about compensation problems]</td></tr>
<tr><td>Disclosed Particulars</td><td>Due date of disclosure</td><td>[redacted]</td><td>Disclosed country and organization</td><td></td><td>Disclosure type</td><td></td></tr>
</table>

■ Identification of inventors

Inventor's name	Assigned Department / Resident Number	Representative	Share (%)	Inventor's address
Sung-Ho CHOI	3G Standard Research Lab. (Research Group) / 700405-1268621	○	80	232-503, Hwangolmaeul 2 dangi APT. Youngtong-dong, Youngtong-gu, Suwon-shi, Kyeonggi-do, Republic of Korea
Kook-Heui LEE	3G Standard Research Lab. (Research Group) / 690807-1788414	-	20	#108-1004, Byucksan 1-cha APT., Suji-cup, Yongin-si, Gyeonggi-do

■ File of employee invention report

Name of File	Description of File
RACH Patent Choisungho 1012.hwp	METHOD FOR ALLOCATION OF COMMON CHANNEL

■ Judgment of invention grade

Subjects of Judgment		Date of Judgment	Grade	Opinion
Inventor	Sung-Ho CHOI	[redacted]	A	Considered to be a superior patent
Dep. chief	Hyun-Woo LEE	[redacted]	A	Expected to develop the ability of W-CDMA RACH
Patent Team		[redacted]	B	a package input through computers
Evaluation committee		[redacted]	A	a package input through computers

■ Dates regarding employee invention

Date of Inventor Report	[redacted]	Approval Date of Team Leader	[redacted]	Receipt Date of Patent Team	[redacted]

■ Receipt number of employee invention : GC-200010-011-1

[ABSTRACT OF THE DISCLOSUSRE]

[ABSTRACT]

The present invention relates to a method for allocating a common channel, i.e., a random access channel (RACH), a common packet channel (CPCH) or a forward access channel (FACH), and more particularly to a method for allocating an adequate common channel among different type of common channels based on the service request and the quality of service.

[REPRESENTATIVE FIGURE]

FIGURE

[INDEX]

CDMA, UMTS, Common Channel, RACH, CPCH, FACH

[SPECIFICATION]

[TITLE OF THE INVENTION]

METHOD FOR ALLOCATION OF COMMON CHANNEL IN CDMA COMMUNICATION SYSTEM

[BRIEF DESCRIPTION OF THE DRAWINGS]

FIG. 1 illustrates a layer structure of a UE according to an embodiment of the present invention;

[DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT]

[OBJECT OF THE INVENTION]

[RELATED FIELD AND PRIOR ART OF THE INVENTION]

The present invention relates generally to a method for allocating a common channel in a CDMA (Code Division Multiple Access) mobile communication system, and in particular, to a method for allocating a common channel, i.e., Random Access Channel (RACHH), Forward Access Channel (FACH), and Common Packet Channel (CPCH).

With the rapid development of the mobile communication industry, a future mobile communication system will provide not only a voice (circuit) service but also advanced services such as a data service and an image service. Generally, the future mobile communication system employs a CDMA (Code Division Multiple Access) system, and the CDMA system is classified into a synchronous system and an asynchronous system. The synchronous system is chiefly adopted in United States, while the asynchronous system is mainly adopted in Europe and Japan. However, the standardization work on the future mobile communication system is being separately carried out for the synchronous system and the asynchronous system. The European future mobile communication system is called "UMTS (Universal Mobile Telecommunication System)".

The standardization work provides various specifications for the data

service and the images service as well as the voice service, required in the future mobile communication system, and particularly, for channel allocation.

A UMTS W-CDMA (Wideband Code Division Multiple Access) communication system, the European future mobile communication system, uses a random access channel (RACH) and a common packet channel (CPCH) as a reverse common channel, and uses a forward access channel (FACH) as a forward common channel.

Among the reverse common channels of the W-CDMA communication system, the RACH can have characteristics being dependent on a TTI (Transmit Time Interval) and a channel coding mode, and is mapped with a physical random access channel (PRACH) on a one-to-one basis. Further, the PRACH can also have characteristics being dependent on available signatures and an access sub-channel. Therefore, the RACHs can be distinguished (identified) based on the TTI and the channel coding mode, while the PRACHs can be distinguished according to the number of available signatures and the access sub-channel. In addition, an available spreading factor (SF) can be also used in distinguishing the PRACHs.

As the RACHs and PRACHs have various characteristics, they can be used for different purposes according to their service types. In addition, information on the RACH/PRACH is broadcast by a Node B, and upon receiving the RACH/PRACH information, a UE can select RACH/PRACH to use depending on the received RACH/PRACH information. Alternatively, the Node B can select RACH/PRACH to be used by a specific UE based on a service to be used by the UE, and then inform the UE of the selected RACH/PRACH.

Like the RACH, the FACH and the CPCH also have different characteristics to provide different services. Alternatively, the Node B can determine the FACH and the CPCH to be used by the UE and then transmit information on the determined FACH and CPCH to the UE.

Meanwhile, the RACH, the FACH and the CPCH are allocated to the UEs by a serving radio network controller (SRNC). The SRNC connected to a core network (CN) exchanges information on service provided between the UE and the CN with the CN. The SRNC determines a channel to be allocated to the UE using the service information transmitted from the CN.

The following is the configuration of RAB (Radio Access Bearer) parameters of a service information message used by the CN to inform the SRNC of the service information.

RAB Parameters (Service Information)

IE/Group Name	Presence	Range	IE type and reference	Semantics description
RAB parameters				
>Traffic Class	M		ENUMERATED (conversational, streaming, interactive, background, ...)	Desc.: This IE indicates the type of application for which the Radio Access Bearer service is optimised
>RAB Asymmetry Indicator	M		ENUMERATED (Symmetric bidirectional, Asymmetric Uni directional downlink, Asymmetric Uni directional Uplink, Asymmetric Bidirectional, ...)	Desc.: This IE indicates asymmetry or symmetry of the RAB and traffic direction

>Maximum Bit Rate	M	1 to <Nbr-SeparateTrafficDirections>	INTEGER (1..16,000,000)	Desc.: This IE indicates the maximum number of bits delivered by UTRAN and to UTRAN at a SAP within a period of time, divided by the duration of the period. The unit is: bit/s Usage: When Nbr-SeparateTrafficDirections is equal to 2, then Maximum Bit Rate attribute for downlink is signalled first, then Maximum Bit Rate attribute for uplink
>Guaranteed Bit Rate	C-iftrafficConv-Stream	0 to <Nbr-SeparateTrafficDirections>	INTEGER (0..16,000,000)	Desc.: This IE indicates the guaranteed number of bits delivered at a SAP within a period of time (provided that there is data to deliver), divided by the duration of the period. The unit is: bit/s Usage: 1. When Nbr-SeparateTrafficDirections is equal to 2, then Guaranteed Bit Rate for downlink is signalled first, then Guaranteed Bit Rate for uplink 2. Delay and reliability attributes only apply up to the guaranteed bit rate 3. Conditional value: · Set to lowest rate controllable RAB Subflow Combination rate given by the largest RAB Subflow Combination SDU size, when present and calculated Iu Transmission Interval · Set to N/A (=0) when traffic class indicates Interactive or Background

>Delivery Order	M		ENUMERATED (delivery order requested, delivery order not requested)	Desc: This IE indicates that whether the RAB shall provide in sequence SDU delivery or not Usage: Delivery order requested: in sequence delivery shall be guaranteed by UTRAN on all RAB SDUs Delivery order not requested: in sequence delivery is not required from UTRAN
>Maximum SDU size	M		INTEGER (0..32768)	Desc.: This IE indicates the maximum allowed SDU size The unit is: bit. Usage: Conditional value: set to largest RAB Subflow Combination compound SDU size when present among the different RAB Subflow Combination
>SDU parameters		1 to <maxRABSubflows>	See below	Desc.: This IE contains the parameters characterizing the RAB SDUs Usage Given per subflow with first occurence corresponding to subflow#1 etc·
>Transfer Delay	C-iftrafficConv-Stream		INTEGER (0..65535)	Desc.: This IE indicates the maximum delay for 95th percentile of the distribution of delay for all delivered SDUs during the lifetime of a RAB. where delay for an SDU is defined as the time from a request to transfer an SDU at one SAP to its delivery at the other SAP The unit is: millisecond. Usage:-

>Traffic Handling priority	C - iftrafficInteractiv		INTEGER (spare (0), highest (1), lowest (14), no priority used (15)) (0?5)	Desc.: This IE specifies the relative importance for handling of all SDUs belonging to the radio access bearer compared to the SDUs of other bearers Usage: -
>Allocation/Retention priority	O		See below	Desc.: This IE specifies the relative importance compared to other Radio access bearers for allocation and retention of the Radio access bearer. Usage: If this IE is not received, the request is regarded as it cannot trigger the preemption process and it is vulnerable to the preemption process.
>Source Statistics descriptor	C-iftrafficConv-Stream		ENUMERATED (speech, unknown, ?	Desc.: This IE specifies characteristics of the source of submitted SDUs Usage: -

Table 1. Configuration of RAB (Radio Access Bearer) parameters of a service information message used by the CN to inform the SRNC of the service information.

The SRNC selects a dedicated channel (DCH) or a common channel using the above service information. If the common channel is selected, the SRNC can select RACH or CPCH in response to a service request. In addition, a maximum bit rate and a guaranteed bit rate are used in selecting a minimum SF and a channelization code to be used by the common channel. In addition, a traffic handling priority and a transfer delay are selected based on the characteristics of the physical channel, i.e., based on the sub-channel and the

number of signatures.

When the UE allocated a channel by the SRNC performs a handover (or handoff), a DRNC, an RNC of a Node B newly accessed by the UE and the SRNC may be changed. The SRNC and the DRNC are distinguished from the viewpoint of the UE. If the SRNC is connected to the UE not directly but through the DRNC, then the SRNC cannot personally select a channel and allocate the selected channel to the UE.

The reasons that the SRNC cannot personally allocate a channel to the UE are as follows.

(1) Channels allocated to a cell in the DRNC are determined by the DRNC,

(2) The SRNC does not have information on the allocated common channel in the DRNC.

(3) The SRNC cannot determine a common channel allocated to the cell in the DRNC.

(1) The DRNC does not have information on a service provided to the UE.

(2) The SRNC does not transmit information on a service provided to the UE.

Thus, conventionally, when the SRNC is connected to the UE through the DRNC, i.e., when the UE performs a handover, the UE cannot be allocated a common channel.

[SUBSTANTIAL MATTER OF THE INVENTION]

It is, therefore, an object of the present invention to provide concrete contents on the SRNC and the DRNC exchange information required in allocating a channel to UE based on service information transmitted from CN to

SRNC.

It is another object of the present invention to provide a signaling message, so that the SRNC and the DRNC exchange information.

It is the other object of the present invention to provide a method in which SRNC and DRNC exchange required information, so that a DRNC can allocate the most proper common channel to a UE.

[CONSTRUCTION AND OPERATION OF THE INVENTION]

A preferred embodiment of the present invention will be described herein below with reference to the accompanying drawings.

In a first embodiment, the SRNC transmits service information received from a CN to the DRNC. Upon receiving the service information, the DRNC selects a common channel based on the received service information and then allocates the selected common channel to the UE.

In a second embodiment, the SRNC selects a common channel service informant received from the CN and transmits information on the selected common channel to the DRNC. Upon receiving the information on the common channel, the DRNC allocates a common channel to the UE based on the received common channel information. In the first and second embodiments, the common channel selected by the SRNC may be identical to or different from the common channel selected by the DRNC.

A description of the first embodiment will be given below. As stated above, the service information transmitted from the CN to the SRNC is shown Tables 1A to 1C. In this embodiment, the SRNC should transmit the service information received from the CN to the DRNC. Thus, a definition of a message transmitted from the SRNC to the DRNC will be given.

The SRNC can transmit the service information to the DRNC by using a Common Transport Channel Resources Request message. The SRNC transmits some or all of the service information to the DRNC, using the Common Transport Channel Resources Request message. Upon receiving the Common Transport Channel Resources Request message, the DRNC detects the service information included in the received Common Transport Channel Resources Request message. The DRNC then allocates a common transport channel or a common physical channel to the UE based on the detected service information. Shown in Table 2 is a format of the Common Transport Channel Resources Request message according to the first embodiment of the present invention.

Table 2

IE/Group Name	Presence	Range	IE type and reference	Semantics description	Criticality	Assigned Criticality
Message Type	M		9.2.1.40		YES	Reject
Transaction ID	M		9.2.1.59		YES	Reject
D-RNTI	M		9.2.1.25		YES	Reject
C-ID	O		9.2.1.61	Request a new transport bearer or to use an existing bearer for the user plane	YES	Reject
Transport Bearer Request Indicator	M		9.2.1.60	Indicates the Iur transport bearer to be used for the user plane	YES	Reject
Transport Bearer ID	M					
RAB information		0.1				
Traffic Class	O					
RAB Asymmetry Indicator	O					
Maximum Bit Rate	O					
Guaranteed Bit Rate	O					
Delivery Order	O					
Transfer Delay	O					
Traffic Handling priority	O					
Allocation/Retention priority	O					

Priority level	O					
Pre-emption Capability	O					
Pre-emption Mulnerability	O					
Queuing allowed	O					

Table 2 shows some of the service information received from the CN. That is, in selecting service information required for selecting a common channel, the SRNC may select all of the information received from the CN or partially selects the information shown in Table 2.

The service information required by the DRNC in allocating a common channel to the UE includes the following parameters that should be transmitted from the SRNC to the DRNC.

(1) Maximum Bit Rate

The maximum bit rate represents a requirement for a maximum value of a bit rate of data to be transmitted/received over the common channel. Therefore, upon receiving the maximum bit rate, the DRNC should allocate the common channel within a range not exceeding the maximum bit rate. This is because the maximum bit rate can become a criterion for determining a spreading factor (SF) indicating a bit rate a physical channel. Therefore, the maximum bit rate can become a criterion for selecting a random access channel (RACH) rather than a common packet channel (CPCH), for the SF<32.

(2) Guaranteed Bit Rate

The guaranteed bit rate represents a requirement for a guaranteed value of a bit rate of data to be transmitted/received over the common channel. Therefore, upon receiving the guaranteed bit rate, the DRNC should allocate the common channel within a range capable of guaranteeing the received guaranteed bit rate. For example, if the received guaranteed bit rate requires a spreading factor SF=16, the DRNC should allocate the CPCH rather than the RACH. In

addition, the DRNC should allocate a CPCH set capable of supporting the SF 16 among CPCH sets. Likewise, even in the case of a forward access channel (FACH), the DRNC should allocate a secondary common control physical channel (S-CCPCH) capable of supporting the spreading factor SF=16.

The service information required by the DRNC in allocating a common channel to the UE includes Traffic Class, RAB Asymmetry Indicator, Delivery Order Transfer Delay, Traffic Handling Priority, and Allocation/Retention Priority parameters. These parameters can be used by the DRNC as criterions for selecting a common channel.

FIG. 1 illustrates a method for allocating a common channel to a UE in the case where an SRNC is different from a DRNC. Referring to FIG. 1, upon receiving an RAB parameter message with service information from a CN 30 (Step 100), an SRNC 20 determines service parameters to be transmitted to a DRNC 10 among the RAB parameter message. As mentioned above, however, the SRNC 20 can also select a specific common channel among available common channels. For example, in the case of an uplink, the SRNC 20 can previously determine (select) a common channel to be used among the RACH and the CPCH, and then transmit information of the determined common channel. In this case, the SRNC 20 must recognize whether the DRNC 10 provides the CPCH.

After determining the service parameters to be transmitted to the DRNC 10, the SRNC 20 transmits the determined service parameters and information on the type of the selected common channel to the DRNC 10 (Step 102). Of course, it is also possible to define a new procedure instead of using the Common Transport Channel Resources Request message.

Upon receiving the Common Transport Channel Resources Request message from the SRNC 20, the DRNC 10 determines a common channel to be used by the UE by detecting the service parameters included in the received

Common Transport Channel Resources Request message and analyzing the detected service parameters (Step 103). The DRNC 10 can also determine the common channel to be allocated to the UE considering a current state of the common channels in addition to the received information. That is, the DRNC 10 can select a common channel less frequently used by other UEs among a plurality of available common channels.

After determining the common channel to be allocated to the UE, the DRNC 10 transmits information on the determined common channel to the SRNC 20 (Step 104). The Common Transport Channel Resources Response message may include additional information such as information on a transport channel and a physical channel of the determined common channel, or its priority.

A procedure for transmitting the service parameters from the SRNC 20 to the DRNC 10 and a procedure for determining a common channel by the DRNC 10 using the service parameters received from the SRNC 20 will be described in detail with reference to FIGs. 2 and 3, respectively.

FIG. 2 illustrates a procedure for transmitting information required for allocating a channel by a DRNC using the service information transmitted from the SRNC 20 to the CN 30.

Referring to FIG. 2, in step 201, the SRNC 20 determines service parameters to be transmitted to the DRNC 10 among the RAB parameters. Here, the SRNC 20 can select partial service parameters shown in Table 2 from the service parameters included in the RAB parameter message, as the service parameters to be transmitted to the DRNC 10. For example, the service parameters to may include the maximum bit rate or the guaranteed bit rate. The service parameters are service parameters decided to be necessarily considered by the DRNC 10 in determining the common channel.

In step 202, the SRNC 20 transmits the determined service parameters to

the DRNC 10 along with an RNSAP (Radio Network Subsystem Application Part) signaling message. For example, the RNSAP signaling message used to transmit the service parameters may be a Common Transport Channel Resources Request message.

In step 203, the SRNC 20 receives an RNSAP Response signaling message from the DRNC 10 in response to the Common Transport Channel Resources Request message.

In step 204, the SRNC 20 detects information on a common channel to be allocated by the DRNC 10 to the UE included in the received RNSAP Response signaling message by analyzing the RNSAP Response signaling message, and transmits the detected common channel information to the UE using an RRC (Radio Resource Control) message.

In step 205, upon receiving an RRC Response message from the UE in response to the RRC message, the SRNC 20 starts exchanging data from the DRNC 10 with the CN 30, and then ends the procedure after the data exchange.

FIG. 3 illustrates a procedure for transmitting information required for allocating a common channel from the DRNC 10 to the SRNC 20.

Referring to FIG. 3, in step 301, the DRNC 10 receives an RNSAP signaling message from the SRNC 20. In step 302, the DRNC 10 detects and analyzes the received service parameters and then determines a common channel base on the service parameters. In the case of the uplink, the DRNC 10 selects a common channel to be used out of the RACH and the CPCH, and then determines the most preferred common channel among PRACHs currently available in the DRNC 10 or the CPCH sets for the respective cases, based on the received service parameters. Alternatively, the DRNC 10 can also determine a common channel to be allocated to the UE considering a state of the common channels currently in use.

In step 303, the DRNC 10 transmits information on the determined common channel to the SRNC 20 along with an RNSAP Response signaling message, a response message replying to the RNSAP signaling message received from the SRNC 20.

In step 304, the DRNC 10 starts exchanging data from the SRNC 20 with the UE, and then ends the procedure after the data exchange.

In the second embodiment, the SRNC 20 selects the type of a common channel from an RAB parameter received from the CN 30, and then transmits the service parameters and the information on the selected common channel to the DRNC 10. The DRNC 10 then allocates a common channel to the UE based on the type of the common channel and the service parameters, received from the SRNC 20. This procedure will be described in detail with reference to FIGs. 4 and 5.

FIG. 4 illustrates a procedure for transmitting information required for allocating a channel by the DRNC using the service information transmitted from the CN.

Upon receiving a RAB parameter message from the CN 30, the SRNC 20 determines service parameters to be transmitted to the DRNC 10 in step 401. Likewise, the service parameters to be determined may include some of the RAB parameter message. For example, the service parameters transmitted to the DRNC 10 may include the maximum bit rate or the guaranteed bit rate. Such service parameters are service parameters decided to be necessarily considered by the DRNC 10 in determining the common channel.

In step 402, the SRNC 20 selects the type of a common channel to be used based on the RAB parameters. Here, if the common channel to be allocated to the UE is a downlink common channel, the step 420 can be omitted because

only one type of the common channel is defined currently. This is because the currently defined downlink common channel includes only the FACH. However, the currently defined uplink common channel includes the RACH and the CPCH. Therefore, the SRNC 20 can first select a preferred common channel out of the two common channels, based on the RAB parameters, and then send a request for the selected common channel to the DRNC 10. Here, the SRNC 20 must previously recognize whether the DRNC 10 supports the CPCH.

In step 403, the SRNC 20 transmits the determine service parameters and the common channel information to the DRNC 10 along with the RNSAP signaling message. For example, the RNSAP signaling message used in transmitting the service parameters and the common channel information may be a Common Transport Channel Resources Request message.

In step 404, the SRNC 20 receives an RNSAP Response signaling message, a response message answering to the RNSAP signaling message, from the DRNC 10. The received RNSAP Response signaling message, i.e., a Common Transport Channel Resources Response message, includes information on the common channel determined by the DRNC 10.

In step 405, the SRNC 20 detects information on the common channel determined by the DRNC by analyzing the RNSAP Response signaling message, and then transmits the detected information to the UE along with an RRC message.

In step 406, upon receiving an RRC Response message, a response message replying to the transmitted RRC message, from the UE, the SRNC 20 starts exchanging data with the CN 30 and the DRNC 10, and then ends the procedure after the data exchange.

FIG. 5 illustrates a procedure for transmitting information required for allocating a common channel from the DRNC to the SRNC.

Referring to FIG. 5, in step 501, the DRNC 10 receives an RNSAP signaling message from the SRNC 20. The DRNC 10 detects service parameters and the type of the common channel from the RNSAP signaling message.

In step 502, the DRNC 10 determines whether the type of the common channel is an RACH. Thus, the DRNC 10 determines whether the type of the common channel allocated by the SRNC 20 is an RACH. As the result of the determination, if the type of the common channel is the RACH, the DRNC 10 proceeds to step 503. Otherwise, if the type of the common channel is the CPCH, then the DRNC 10 proceeds to step 506. In addition, if the common channel to be allocated to the UE is a downlink common channel, the SRNC 20 is not required to separately determine the type of the common channel as shown in FIGs. 2 and 3, because the downlink common channel includes only the FACH.

In step 503, the DRNC 10 determines a PRACH based on the detected service parameters. Here, the DRNC 10 determines a PRACH among PRACHs defined in the DRNC 10 based on the service parameters detected from the RAB parameter message. Further, the DRNC 10 determines a PRACH for the UE considering a state of the PRACHs currently in use.

In step 504, the DRNC 10 transmits information on the determined PRACH and its associated RACH to the SRNC 20 along with an RNSAP Response message, i.e., the Common Transport Channel Resources Response message. In step 505, the DRNC 10 starts exchanging data with the UE and the SRNC 20, and then ends the procedure after the data exchange.

The DRNC 10 determines a CPCH set based on the detected service parameters in step 506. Here, the DRNC 10 determines a preferred CPCH set among CPCH sets defined in the DRNC 10, based on the detected service parameters. Alternatively, the DRNC 10 can also select a CPCH set to be allocated to the UE considering a state of the CPCH sets currently in use. Since

the CPCH sets have different characteristics. the DRNC 10 can determine a preferred CPCH set considering the maximum data rate.

In step 507, the DRNC 10 transmits information on the determined common channel to the SRNC 20 along with an RNSAP Response signaling message.

In step 508, the DRNC 10 starts receiving a CPCH from the UE and transmitting the received CPCH to the SRNC 20, and then ends the procedure after the data transmission.

[EFFECTS OF THE INVENTION]

As described above, to select a common channel, the SRNC transmits information stored therein to the DRNC so that the DRNC may determine a common channel proper to the UE, thus increasing utilization efficiency of the common channel and providing various services. In particular, the CPCHs are given different characteristics according to CPCH sets, and then, the DRNC sets an effective CPCH set according to service requests from the UE, thus providing a high-quality service.

[PATENT CLAIMS]

1.

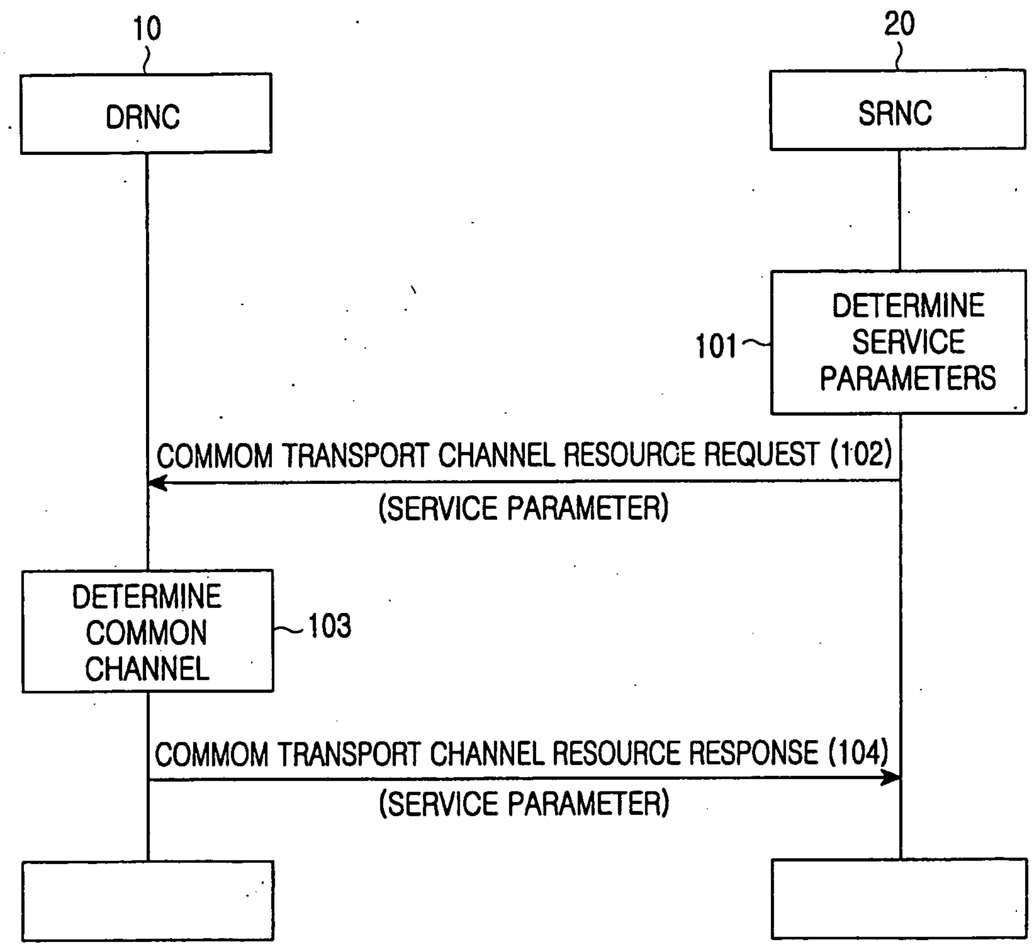
10
DRNC
20
SRNC
DETERMINE SERVICE PARAMETERS
101
COMMOM TRANSPORT CHANNEL RESOURCE REQUEST (102)
(SERVICE PARAMETER)
DETERMINE COMMON CHANNEL
103
COMMOM TRANSPORT CHANNEL RESOURCE RESPONSE (104)
(SERVICE PARAMETER)

FIG.1

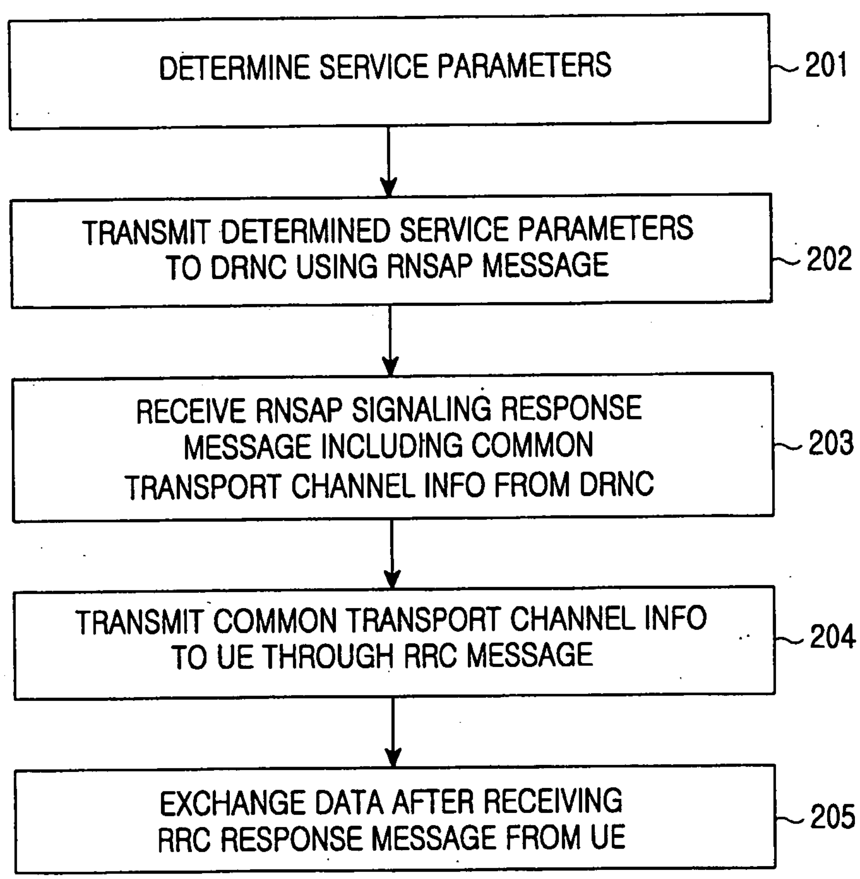
DETERMINE SERVICE PARAMETERS
201
TRANSMIT DETERMINED SERVICE PARAMETERS TO DRNC USING RNSAP MESSAGE
202
RECEIVE RNSAP SIGNALING RESPONSE MESSAGE INCLUDING COMMON TRANSPORT CHANNEL INFO FROM DRNC
203
TRANSMIT COMMON TRANSPORT CHANNEL INFO TO UE THROUGH RRC MESSAGE
204
EXCHANGE DATA AFTER RECEIVING RRC RESPONSE MESSAGE FROM UE
205

FIG.2

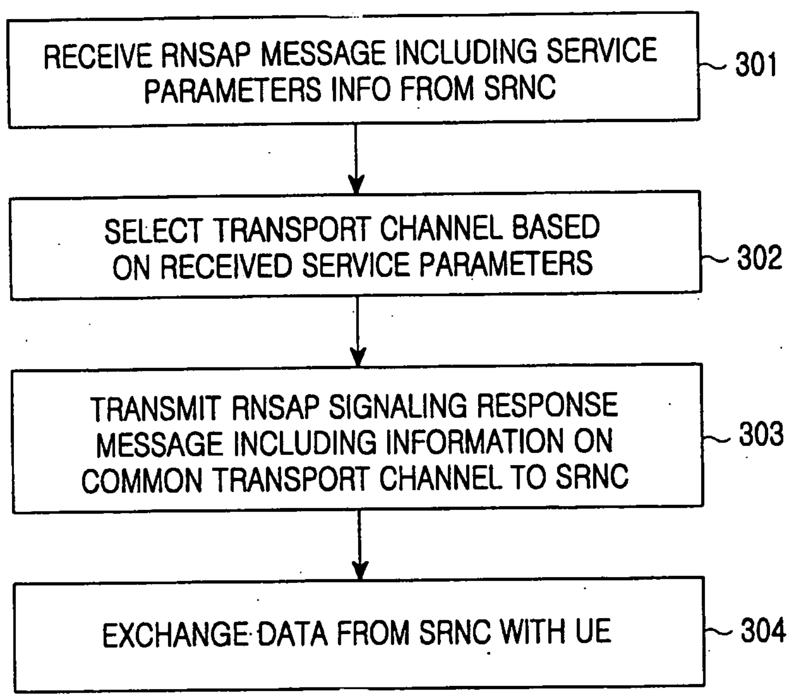
RECEIVE RNSAP MESSAGE INCLUDING SERVICE PARAMETERS INFO FROM SRNC
301
SELECT TRANSPORT CHANNEL BASED ON RECEIVED SERVICE PARAMETERS
302
TRANSMIT RNSAP SIGNALING RESPONSE MESSAGE INCLUDING INFORMATION ON COMMON TRANSPORT CHANNEL TO SRNC
303
EXCHANGE DATA FROM SRNC WITH UE
304

FIG.3

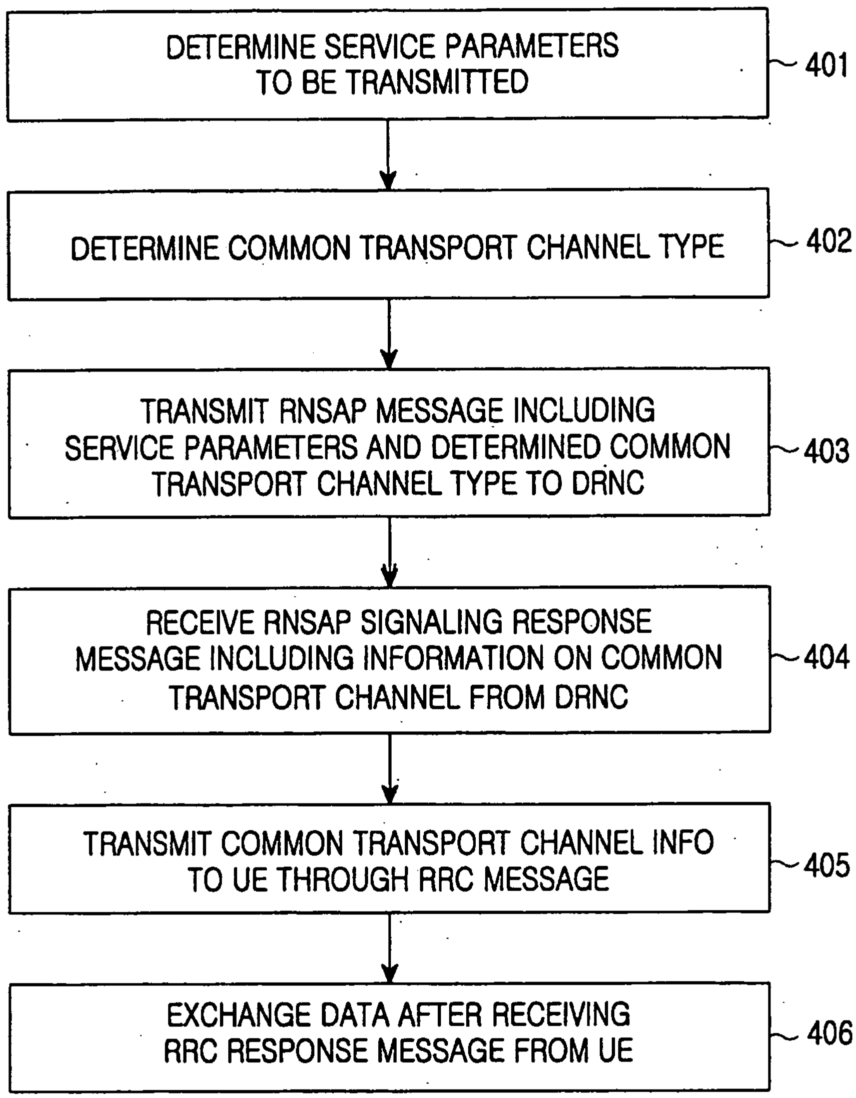
DETERMINE SERVICE PARAMETERS TO BE TRANSMITTED
401
DETERMINE COMMON TRANSPORT CHANNEL TYPE
402
TRANSMIT RNSAP MESSAGE INCLUDING SERVICE PARAMETERS AND DETERMINED COMMON TRANSPORT CHANNEL TYPE TO DRNC
403
RECEIVE RNSAP SIGNALING RESPONSE MESSAGE INCLUDING INFORMATION ON COMMON TRANSPORT CHANNEL FROM DRNC
404
TRANSMIT COMMON TRANSPORT CHANNEL INFO TO UE THROUGH RRC MESSAGE
405
EXCHANGE DATA AFTER RECEIVING RRC RESPONSE MESSAGE FROM UE
406

FIG.4

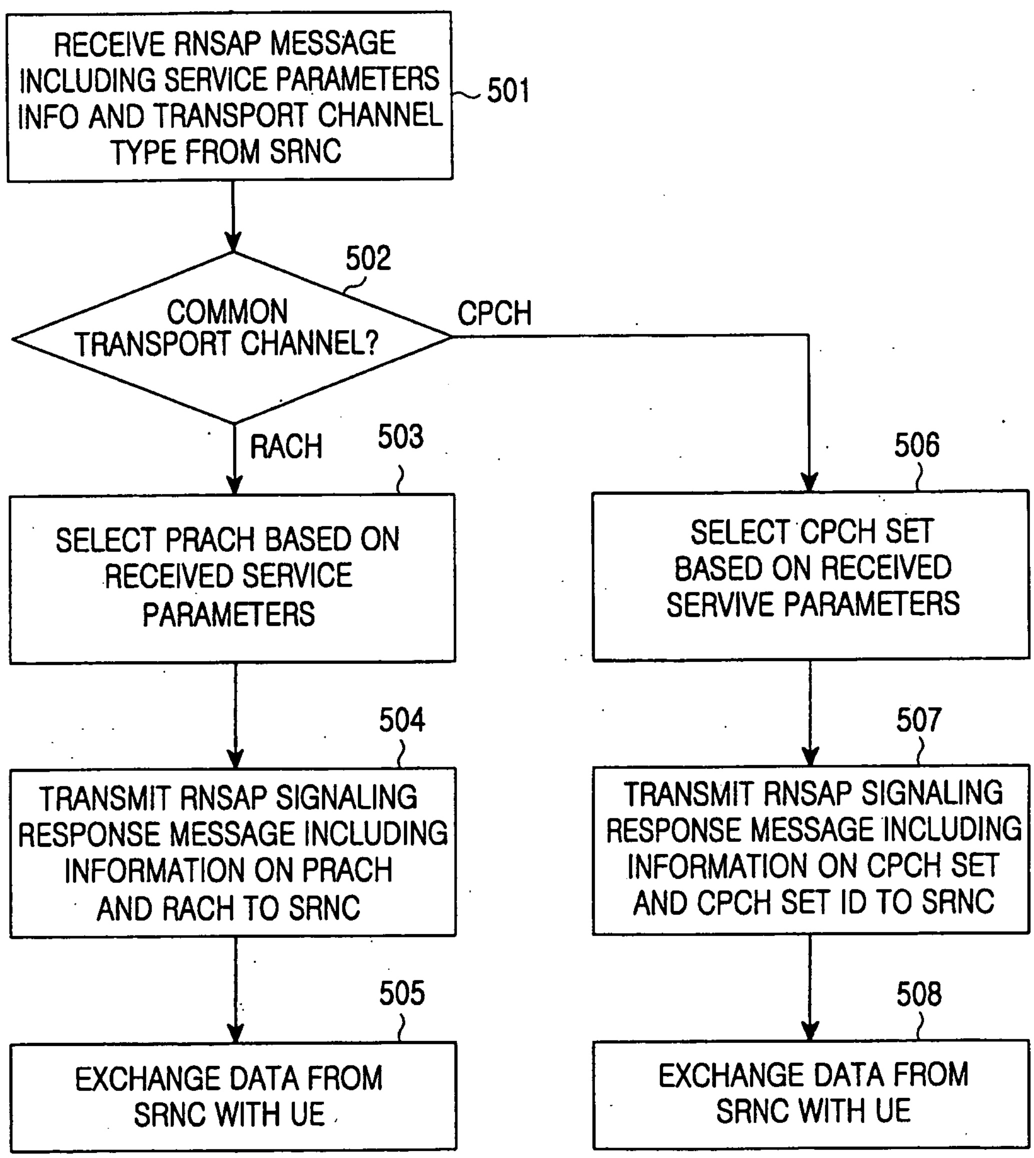
RECEIVE RNSAP MESSAGE INCLUDING SERVICE PARAMETERS INFO AND TRANSPORT CHANNEL TYPE FROM SRNC
501
502
COMMON TRANSPORT CHANNEL?
CPCH
RACH
503
SELECT PRACH BASED ON RECEIVED SERVICE PARAMETERS
506
SELECT CPCH SET BASED ON RECEIVED SERVIVE PARAMETERS
504
TRANSMIT RNSAP SIGNALING RESPONSE MESSAGE INCLUDING INFORMATION ON PRACH AND RACH TO SRNC
507
TRANSMIT RNSAP SIGNALING RESPONSE MESSAGE INCLUDING INFORMATION ON CPCH SET AND CPCH SET ID TO SRNC
505
EXCHANGE DATA FROM SRNC WITH UE
508
EXCHANGE DATA FROM SRNC WITH UE

FIG.5